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ABSTRACT

This module is one of five modules on length, area, volume and capacity, mass, and temperature, develcped for the use of teachers and teacher-trainer team leaders. Primary and intermediate activities in this booklet concentrate on the concept of temperature with emphasis on metric measurement. The objectives and needed materials for each activity are listed. (MN)

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ALBANY-SCHOHARIE-SCHENECTADY BOCES

PROJECT:

"METRIC EDUCATION: WE ARE GETTING READY FOR THE CHANGE"

MODULE ON TEMPERATURE

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTRODUCTION

This module on temperature is one of the five modules, on length, area, volume and capacity, mass, and temperature, developed, for the use of teachers and teacher-trainer team leaders, as a product from the Project "Metric Education: We Are Getting Ready For The Change."

Parts of this module were developed and tried during the recent workshops conducted for the BOCES level team leaders. Participants of these workshops made a significant contribution in the development of this module.

The activities incorporated in this module are only suggestive in nature and teachers are free to modify them according to their classroom needs.

Piyush C. Agrawal
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December 1977

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SECTION 1

P R I M A R Y

OBJECTIVE 1: The student will be able to read temperature to the nearest whole degree on the Celsius scale.

MATERIALS:
Demonstration Thermometer (Celsius, of course)
Classroom Thermometer
3 x 5 cards with various temperatures written on them;
(i.e.) 50°C, 37°C, 100°C
Large Card-Board Thermometer for Bulletin Board
Paper Arrow with tac, pin, or tape

ACTIVITIES:
1) Show and Tell - teacher explains thermometer using a demonstration thermometer and shows students how to read the temperature.
2) Students practice reading demonstration thermometer and other thermometers.
3) Pick a card (which has temperature written on it) and have student adjust demonstration thermometer to that temperature; or use the same idea to plan "pin the pointer" on the thermometer.

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OBJECTIVE 2: The student will be able to identify freezing and boiling temperature of water on the Celsius scale.

MATERIALS:
Celsius Thermometer(s)
Water in pan or pyrex container
Source of heat (to boil water)
Ice in ice tray
Worksheet with pictures of Celsius thermometers
(labeled, but no temperature indicated)
Markers (ie) Red Crayons

ACTIVITIES:
1) Students practice reading thermometers which are placed in boiling water and ice or snow.
2) Hand-out sheets of animated thermometer - students color temperature on thermometer of boiling water (100°C) and ice or snow (0°C).

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OBJECTIVE 3: The student will be able to recognize and write symbols for degree Celsius.

MATERIALS:
Chalk Board or Overhead Projector of Flip Chart
Demonstration Thermometer

ACTIVITIES:
After teacher demonstrates how to write the temperature to students, students will practice writing temperature on chalk board to indicate the reading on the demonstration thermometer. If he or she is correct, he or she will be able to adjust demonstration thermometer and select the next student.

SECTION 2

INTERMEDIATE

OBJECTIVE 1: The student will be able to read a celsius thermometer.

MATERIALS:
Celsius Thermometer(s)
Graph paper or Homemade chart for recording Daily Temperatures
Water in pan or pyrex container
Source of heat to boil water
Ice in ice tray
Cup(s) of soup
Milk in milk container
Pictures of various foods, beverages and seasonal activities
(optional) answer window
Demonstration Thermometer

ACTIVITIES:
1) Weather Person - students take outside air temperature daily (same time, same place), and teacher can record and/or graph results with students.
2) Check temperatures of various places and things (i.e.) tap water, milk, soup, ice, boiling water, room temperature, body temperature, etc.
3) Students and teachers cut out "hot and cold" pictures from magazines. Mount and/or display these pictures. Adjust demonstration thermometer to indicate temperature of different pictures. Check to be sure wherever possible. Or, estimate temperatures and have a flip up window to verify.

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OBJECTIVE 2: Student will be able to read a temperature on a Celsius thermometer and record the reading in degrees Celsius.

MATERIALS:
Worksheet with Celsius thermometer shown indicating various temperatures and a blank space to write in the reading.
Worksheet with Celsius thermometers
(labeled, but no temperature indicated)
Markers (i.e.) Red Crayons
Celsius Thermometers
Graph paper or homemade chart for recording temperatures
Tap water
Ice
Boiling Water
Worksheet for various stations

ACTIVITIES:
1) Make up worksheets with thermometer on them. Have students record temperatures indicated on various thermometers.
2) Have degrees Celsius on worksheet with blank thermometer - children color in thermometers to indicate given temperature.
3) If possible, have students record daily outdoor temperatures for a week; month; and let them average for the same period.
4) Have students graph or chart temperatures for a month and put it on the daily bulletin or given as an announcement.
5) Using a celsius thermometer, measure the temperature of various materials or places (stations). Record on a worksheet. Teacher may reveal correct answer for students when all are finished.